

## MEMORANDUM

TO: Bob Durand, Secretary, EOE  
ATTN: Arthur Pugsley, MEPA Unit  
FROM: Tom Skinner, Director, CZM  
DATE: April 5, 2002  
RE: EOE 12643 – The Cape Wind Energy Project; Barnstable/Yarmouth

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The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Environmental Notification Form (ENF), noticed in the Environmental Monitor dated November 24, 2001. As discussed below, the proposed project appears to be categorically included for the filing of an Environmental Impact Report (EIR). There appear, however, to be threshold matters to be resolved in the federal Environmental Impact Statement (EIS) that may affect the scope of the EIR.

In general, CZM supports the development of renewable, nonpolluting energy sources. The data collection tower currently being proposed by the applicants is an example of the type of information gathering that can be of great assistance in identifying appropriate sources of renewable energy. The proposed project, however, raises three significant categories of issues:

- The wind farm is proposed in an area that is host to a number of uses, some of which appear to conflict with the proposed project. In its application for an Army Corps of Engineers (ACOE) Section 10 permit, the applicants have requested restrictions on other uses of the project area and a mile-wide corridor surrounding the project site. Were the project in state waters, M.G.L. c. 91: Public Waterfront Act could be expected to have some role in licensing private use of public trust lands and thus evaluating the public trust issues raised by such a project. In federal waters, where the project is proposed, there is no such mechanism to resolve the significant public trust issues of resource allocation and use that this project poses. In order to address the public trust issues raised by the proposed project, legislation proposed by the Department of the Interior (DOI) (described below) should be considered in concert with the Cape Wind proposal.
- The applicant states that the proposed wind farm will provide power to the New England electrical grid. Power to the New England grid can be generated by a number of technologies in a number of locations. The

applicant appears to have decided on wind technology and the Horseshoe Shoals site without conducting an appropriate alternatives analysis.

- The applicant has applied for permits to erect a data collection tower on Horseshoe Shoals. While the proposal to collect data only on Horseshoe Shoals would appear to minimize the opportunity to consider other alternatives, the fact that these data were not collected prior to this ENF filing may limit the applicant's ability to assert that the project will have limited adverse impacts at the selected site or that the proposed project is the least environmentally damaging alternative. Further, the project proponents have apparently undertaken a number of studies, the results of which, but not the studies themselves, were described in the ENF. It does not appear that the data addresses the regulatory requirements for the proposed activities.

## **Project Description**

The project proposed entails the construction and operation of 170 wind turbine generators (WTG) on a grid over approximately 26 square miles of sub-tidal area known as Horseshoe Shoal in Nantucket Sound; associated submarine cables for interconnection of the WTGs; an elevated electric service platform; and “jet-plow” placement of two 10.5-mile long 115kv submarine cables providing interconnection to existing NStar transmission lines on Cape Cod.

The WTGs are described as being 263 feet in height, each fitted with three 160-foot blade rotor systems for a total height of 423 feet above mean sea level (MSL). The applicant plans to place the WTGs on 16- to 21-foot diameter mono-pile foundations driven to approximately 80 feet below the ocean floor. The support structures may require scour protection around the base to prevent erosion. The proposed structures will be lighted in accordance with Federal Aviation Administration (FAA) and United States Coast Guard (USCG) regulations.

Submarine cables are to be routed from the WTG array in “jet-plowed” trenches along new rights-of-way through Barnstable and Yarmouth waters to a landfall in Yarmouth. From there, the cables are designed to travel within existing rights-of-way along a route approximately four miles long, to an interconnection site adjacent to Route 6 in Barnstable.

## **Comments**

### *Federal Jurisdiction*

The proposed wind farm is to be located in federal waters of Nantucket Sound. Acknowledging the lack of clear federal jurisdiction over such projects in December 2001, the U.S. Department of Interior (DOI), Minerals Management Service (MMS) began a process to develop federal authorities over non-extractive energy sources on the Outer Continental Shelf (OCS). DOI has developed draft legislation that will be

submitted to the Congress shortly. At present, however, the necessary federal authorities for leasing submerged lands for renewable energy projects on the Outer Continental Shelf (OCS) and associated regulations are not available. Clarification of federal authority can be expected to resolve the matter of private exploitation of public waters and land (ocean bottom). The proposed project demonstrates the need for the proposed DOI legislation.

### *Alternatives Analysis*

The applicant's presentation of a specific generating technology and site tends to focus any permitting review on the particulars of the project proposed. CZM believes that it is critical that review of a project of this scope include an evaluation of all feasible alternatives before the focus is narrowed to one particular technology and site.

CZM is requesting that the federal EIS, and to the extent that it is within its jurisdiction, the state EIR include a full alternatives analysis of current and future power demands in the New England region, and potential energy sources and sites for the generation of electrical power for transmission to the New England electric grid. CZM believes that it is not appropriate to consider the details of the proposed wind farm at Horseshoe Shoals until such an analysis has been completed.

Specifically, the applicant has selected wind power as the energy source for the proposed project. Electrical energy can, however, be generated using a number of energy sources and technologies. Each alternative energy source and technology has environmental benefits and detriments. It is important that the full scope of positive and negative impacts of the selected technology be available to the public and regulating agencies.

While strongly suggesting that the power generated by this project will be directly available to residents of Cape Cod, in fact, the power generated by this project will be transmitted to the New England electric grid. Projects supplying power to the grid can be located anywhere in the New England region with suitable resources. The fact that no data on any other possible location has been provided is problematic.

As is not made particularly clear by the ENF, many aspects of the proposal must be described as experimental -- at present, there are no marine installations that compare to this in size or open ocean exposure; nor does it appear that the generating technology on which the project depends is currently in production. An alternative that may be appropriate for consideration is the development of a smaller pilot project.

### *CZM Federal Consistency Jurisdiction*

Contrary to the statement in section 6.2.4 of the ENF, Coastal Zone Management's jurisdiction is not "limited to Project activities occurring within the state's 3-mile limit or that have a direct affect on the natural resources of the Commonwealth". CZM's jurisdiction extends to any federally licensed or permitted activities that have reasonably foreseeable effects on land or water uses or natural resources of the

Massachusetts coastal zone (15 CFR 930.11(b)). Therefore, project components in or affecting Massachusetts coastal resources or uses are subject to CZM's federal consistency review.

Among the program policies with which the project will ultimately be required to demonstrate consistency is CZM's energy policy:

ENERGY POLICY #1 - For coastally dependent energy facilities, consider siting in alternative coastal locations. For non-coastally dependent energy facilities, consider siting in areas outside of the coastal zone. Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.

The alternatives aspect of this policy is of particular importance when responding with the requested analysis. In the context of CZM Energy Policy #1, a determination must be made by CZM that the proposed energy facility is dependent on siting within a coastal location; that is, the project is "coastal dependent". Absent a comprehensive alternatives analysis, CZM does not believe that the proposed project can be found to be consistent with its energy policy.

#### *MEPA Jurisdiction*

The proposed project is described as including two 115kv cables (totaling 230kv) approximately 10.5 miles in length, with more than 5 miles of new rights-of-way. CZM believes that the project, as proposed, exceeds the threshold for mandatory filing of an Environmental Impact Report as described at 301 CMR 11.03(7)(a)4:

(a) ENF and Mandatory EIR.

4. Construction of electric transmission lines with a capacity of 230 or more kv, provided the transmission lines are five or more miles in length along new, unused or abandoned right of way.

It is CZM's understanding that the MEPA jurisdiction over this project is restricted to the activities proposed in state waters, that is, the transmission cables. The proponent, however, has agreed to participate in the full EIR/EIS process without respect to the jurisdiction of MEPA. CZM's review is predicated on information collected through the EIR/EIS process and we therefore request that the EIR incorporate the elements discussed in these comments.

#### *Analysis of Preferred Alternative*

CZM believes that the two matters discussed above, federal jurisdiction and an alternatives analysis, are threshold issues and must be resolved before the details of any particular alternative are evaluated. The selected alternative will, to a large extent, determine the scope of the environmental review.

Some of the CZM program policies, in addition to the energy policy cited above, that may be applicable to a site-specific review are:

HABITAT POLICY #1 - Protect coastal resource areas including salt marshes, shellfish beds, dunes, beaches, barrier beaches, salt ponds, eelgrass beds, and fresh water wetlands for their important role as natural habitats.

COASTAL HAZARD POLICY #1 - Preserve, protect, restore, and enhance the beneficial functions of storm damage prevention and flood control provided by natural coastal landforms, such as dunes, beaches, barrier beaches, coastal banks, land subject to coastal storm flowage, salt marshes, and land under the ocean.

COASTAL HAZARD POLICY #2 - Ensure construction in water bodies and contiguous land areas will minimize interference with water circulation and sediment transport. [...]

PORTS POLICY #3 - preserve and enhance the capacity of Designated Port Areas (DPAs) to accommodate water-dependent industrial uses, and prevent the exclusion of such uses from tidelands and any other DPA lands over which a state agency exerts control by virtue of ownership, regulatory authority, or other legal jurisdiction.

PUBLIC ACCESS POLICY #1 - Ensure that developments proposed near existing public recreation sites minimize their adverse effects.

OCEAN RESOURCES POLICY #2 - Extraction of marine minerals will be considered in areas of state jurisdiction, except where prohibited by MA Ocean Sanctuaries Act, where and when the protection of fisheries, air and marine water quality, marine resources, navigation, and recreation can be assured.

OCEAN RESOURCES POLICY #3 - Accommodate offshore sand and gravel mining needs in areas and in ways that will not adversely affect shoreline areas due to wave direction and dynamics, marine resources and navigation. Mining of sand and gravel, when and where permitted, will be primarily for the purpose of beach nourishment.

GROWTH MANAGEMENT PRINCIPLE #1 - Encourage, through technical assistance and review of publicly funded development, compatibility of proposed development with local community character and scenic resources.

CZM will also be concerned about the financial viability of the project, particularly if it proves to be uneconomic to develop or run, or if the project suffers damage. It will be essential that the applicant have the capacity to restore the site to its natural state, should power generation end for any reason. This issue is addressed in the proposed DOI legislation.

The proposed project is subject to CZM federal consistency review, and therefore the project must be found to be consistent with CZM's enforceable program policies. For further information on this process, please contact Jane W. Mead, Sr. Project Review Coordinator, at 617-626-1219 or visit the CZM web site at [www.state.ma.us/czm/fcr.htm](http://www.state.ma.us/czm/fcr.htm).

TWS/jwm/th

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